

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants : R. Fischer et al.
Serial No. : 10/578,403
Filed : November 13, 2006
For : 2-Halogen-6-Alkyl-Phenyl substituted Spirocyclic Tetramic Acid Derivatives
Group Art Unit : 1626
Examiner : BIANCHI, KRISTIN A

DECLARATION

Dr. Heinz Kehne hereby declares:

- that he is a chemist having studied at the University of Göttingen, Germany;
- that he received his doctor's degree in chemistry at the University of Göttingen, Germany in 1981;
- that he entered the employ of Bayer Cropscience (or the predecessor companies Hoechst, Agrevo, Aventis resp.) in 1982;
- that he has specialized in plant protection biology since 2002;



Biological Examples

1. Pre-emergence herbicidal action

Seeds of monocotyledonous and dicotyledonous weeds and/or crops are placed in sandy loam and covered with soil.

The compounds which are formulated as wettable powders or emulsifiable concentrates are dissolved and diluted with water containing adjuvant and are then applied to the surface of the covering soil at different dose rates at an application volume of 800 or 1000 litres water per ha.

After the treatment, the pots are placed in the greenhouse and kept under good growth conditions for the plants.

The herbicidal effect is assessed visually as per-cent-figure in comparison to the untreated control three to four weeks after application. 100 % efficacy refers to the complete damage of the assessed plants, 0 % efficacy refers to the appearance of the untreated control.

2. Post-emergence herbicidal action

Seeds of monocotyledonous and dicotyledonous weeds and/or crops are placed in sandy loam, covered with soil and grown under good greenhouse conditions.

The plants are treated at one-leaf-stage two to three weeks after sowing.

The compounds which are formulated as wettable powders or emulsifiable concentrates are dissolved and diluted with water containing adjuvant and are then applied over the top of the plants at different dose rates at an application volume of 800 or 1000 litres water per ha.

After the treatment, the pots are placed in the greenhouse and kept under good growth conditions for the plants.

The herbicidal effect is assessed visually as per-cent-figure in comparison to the untreated control three to four weeks after application. 100 % efficacy refers to the complete damage of the assessed plants, 0 % efficacy refers to the appearance of the untreated control.

| Structure | Substance | Test type | Dosage | Unit | Assy 1 | Assy 2 | Assy 3 | Assy 4 | Assy 5 | Assy 6 |
|-----------|-----------|-----------|--------|------|--------|--------|--------|--------|--------|--------|
| | | VA | 250 | g/ha | 0 | 30 | 20 | 0 | 70 | |
| | | VA | 250 | g/ha | | 80 | 50 | 90 | 90 | |
| | | VA | 250 | g/ha | 60 | 10 | | 80 | 0 | |
| | | VA | 320 | g/ha | 100 | 90 | 70 | 90 | 100 | |
| | | VA | 80 | g/ha | 80 | 70 | | 90 | 100 | |

VA = Vorauflauf (pre-emergent)

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according to the
invention

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| Structure | Substance | Pest type | Dose 95 | Unit | LD ₅₀ | NOA | AEF | ED ₅₀ |
|-----------|-----------|-----------|---------|------|------------------|-----|-----|------------------|
| | | NA | 250 | g/ha | 0 | 0 | 0 | |
| | | NA | 250 | g/ha | 50 | 0 | 0 | |
| | | NA | 250 | g/ha | 50 | | | |
| | | NA | 250 | g/ha | 50 | | | |
| | | NA | 320 | g/ha | 90 | 100 | 90 | |
| | | NA | 80 | g/ha | 90 | 90 | 90 | |

NA = Nachauflauf (post-emergent)

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} according to the
invention

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| Structure | Substance | Pest type | Dose 95 | Unit | LD ₅₀ | NOA | AEF | ED ₅₀ |
|-----------|-----------|-----------|---------|------|------------------|-----|-----|------------------|
| | | NA | 250 | g/ha | 50 | 50 | | |
| | | NA | 80 | g/ha | 90 | 90 | | |

NA = Nachauflauf (post-emergent)

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} according to the
invention

| Structure | Substance | Test type | Dosage | Unit | FRUIT | LEAF | STEM | ROOT | AER. | SEED | LEAF |
|-----------|-----------|-----------|--------|----------|-------|------|------|------|------|------|------|
| | | | NA | 250 g/ha | 40 | 100 | 99 | 100 | 100 | 30 | |
| | | | NA | 320 g/ha | 0 | 100 | 100 | 100 | 100 | 70 | |
| | | | NA | 80 g/ha | 0 | 100 | 100 | 100 | 100 | 50 | |

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} according to the invention

| Structure | Substance | Test type | Dosage | Unit | FRUIT | LEAF | STEM | ROOT | AER. | SEED | LEAF |
|-----------|-----------|-----------|--------|----------|-------|------|------|------|------|------|------|
| | | | NA | 250 g/ha | 95 | 95 | 95 | 70 | | | |
| | | | NA | 250 g/ha | 100 | 100 | 100 | 80 | | | |

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} according to the invention

| Structure | Substance | Test type | Dosage | Unit | FRUIT | LEAF | STEM | ROOT | AER. | SEED | LEAF |
|-----------|-----------|-----------|--------|----------|-------|------|------|------|------|------|------|
| | | | NA | 250 g/ha | 50 | 10 | 0 | 0 | | | |
| | | | NA | 80 g/ha | 100 | 100 | 100 | 100 | 50 | | |

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} according to the invention

NA = Nachauflauf (post-emergent)

| Structure | Substance | Test type | Dosage | Unit | Chloro | Heavy Metal | Agron. Activity | WEE Activity | SEED Activity |
|-----------|-----------|-----------|--------|------|--------|----------------|--------------------|-----------------|------------------|
| | | NA | 125 | g/ha | 50 | 99 | 80 | 90 | 90 |
| | | NA | 80 | g/ha | 0 | 100 | 100 | 100 | 100 |

NA = Nachauflauf (post-emergent)

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according to the
invention

| Structure | Substance | Test type | Dosage | Unit | Chloro | Heavy Metal | Agron. Activity | WEE Activity | SEED Activity |
|-----------|-----------|-----------|--------|------|--------|----------------|--------------------|-----------------|------------------|
| | | NA | 80 | g/ha | 60 | 90 | 10 | 0 | 40 |
| | | NA | 80 | g/ha | 10 | 100 | 100 | 50 | 100 |

NA = Nachauflauf (post-emergent)

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invention

| Structure | Substance | Test type | Dosage | Unit | Chloro | Heavy Metal | Agron. Activity | WEE Activity | SEED Activity |
|-----------|-----------|-----------|--------|------|--------|----------------|--------------------|-----------------|------------------|
| | | NA | 250 | g/ha | 70 | 30 | 0 | 60 | 0 |
| | | NA | 320 | g/ha | 100 | 100 | 70 | 100 | 80 |
| | | NA | 80 | g/ha | 100 | 100 | 50 | 100 | 50 |

NA = Nachauflauf (post-emergent)

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according to the
invention

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Object
BEAV
AVER
SEPA

| Structure | Substance | Test type | Dosage | Unit | | | |
|-----------|-----------|-----------|--------|------|----|----|-----|
| | | VA | 250 | g/ha | 90 | 80 | 99 |
| | | VA | 320 | g/ha | 0 | 90 | 100 |
| | | VA | 80 | g/ha | 0 | 90 | 100 |

VA = Vorauflauf (pre-emergent)

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} according to the invention

Object
BEAV
AVER
SEPA

| Structure | Substance | Test type | Dosage | Unit | | | |
|-----------|-----------|-----------|--------|------|----|--|--|
| | | VA | 250 | g/ha | 95 | | |
| | | VA | 250 | g/ha | 99 | | |

VA = Vorauflauf (pre-emergent)

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} according to the invention

Object
BEAV
AVER
SEPA

| Structure | Substance | Test type | Dosage | Unit | | | |
|-----------|-----------|-----------|--------|------|----|-----|--|
| | | VA | 250 | g/ha | 80 | 80 | |
| | | VA | 320 | g/ha | 0 | 100 | |
| | | VA | 80 | g/ha | 0 | 100 | |

VA = Vorauflauf (pre-emergent)

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} according to the invention

| Structure | Substance | Test type | Dosage | Unit | WEED KORN SWEET BRAV SILV SILV |
|-----------|-----------|-----------|----------|-------|---|
| | | VA | 250 g/ha | 90 80 | |
| | | VA | 320 g/ha | 0 100 | |
| | | VA | 80 g/ha | 0 100 | |

VA = Vorauflauf (pre-emergent)

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} according to the invention

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| Structure | Substance | Test type | Dosage | Unit | WEED KORN SWEET BRAV SILV SILV SILV SILV SILV SILV |
|-----------|-----------|-----------|----------|------------------------------|---|
| | | VA | 320 g/ha | 90 60 50 80 90 80 80 30 | |
| | | VA | 320 g/ha | 100 90 80 100 100 100 100 80 | |

VA = Vorauflauf (pre-emergent)

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} according to the invention

| Structure | Substance | Test type | Dosage | Unit | WEED KORN SWEET BRAV SILV SILV |
|-----------|-----------|-----------|----------|------|---|
| | | VA | 250 g/ha | 80 0 | |
| | | VA | 320 g/ha | 0 80 | |
| | | VA | 80 g/ha | 0 80 | |

VA = Vorauflauf (pre-emergent)

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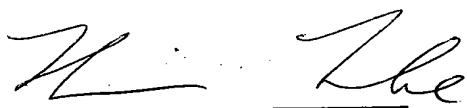
} according to the invention

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The undersigned declarant hereby declares that all statements made herein of his own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

March 11, 2009

Date



Dr. Heinz Kehne